

I CLAIM:

1. A fibrous polyamide substrate having resistance to staining by acid colorants comprising:

a fibrous polyamide substrate having applied thereto a semi-bleached to bleached sulfonated aromatic condensation resin, said resin being selected from the group consisting of condensation products of:

- i) phenolsulfonic acid, dihydroxydiphenyl sulfone and an aldehyde;
- ii) sulfonated dihydroxydiphenylsulfone, dihydroxydiphenyl sulfone and an aldehyde;
- iii) sulfonated dihydroxy diphenyl sulfone and an aldehyde; and
- iv) mixtures of i) ii) and iii).

2. A substrate according to claim 1, having further applied thereto a semi-soluble methacrylic acid polymer of high weight average molecular weight and high number average molecular weight.

3. A substrate according to claim 2, having further applied thereto a semi soluble or insoluble ethyl methacrylate polymer.

4. A substrate according to claim 1, wherein said resin is a condensation product of 4,4-dihydroxy diphenyl sulfone, sulfonated 4,4-dihydroxy diphenyl sulfone and an aldehyde.

206600-656600T

5. A substrate according to claim 1, wherein said resin is a condensation product of phenol sulfonic acid, 4,4-dihydroxy diphenyl sulfone and an aldehyde.
6. A substrate according to claim 1, wherein said resin is a condensation product of sulfonated 4,4-dihydroxydiphenylsulfone and an aldehyde.
7. A substrate according to claim 2, wherein said polymer is a copolymer of methacrylic acid and a comonomer selected from one or more of the following comonomers 2-ethyl hexyl methacrylate, ethyl methacrylate, ethyl acrylate, methyl methacrylate, butyl methacrylate or isobutyl methacrylate.
8. A substrate according to claim 3, wherein said polymer is an ethyl methacrylate copolymer or homopolymer.
9. A substrate according to claim 3, wherein said polymer is a copolymer of ethyl methacrylate and one or more of the following comonomers: ethyl acrylate, 2 ethyl hexyl methacrylate, butyl methacrylate, methyl methacrylate or isobutyl methacrylate.
10. A substrate according to claim 2, wherein said polymer is a copolymer or homopolymer of methacrylic acid having a weight average molecular weight of 100,000 to 500,000 and a number average molecular weight of 50,000 to 100,000.

206TED-65666001

average molecular weight and high number average molecular weight.

16. A formulation according to claim 15, wherein said resin is a condensation product of 4,4-dihydroxydiphenylsulfone, sulfonated 4,4-dihydroxydiphenylsulfone and an aldehyde.

17. A formulation according to claim 15, wherein said resin is a condensation product of phenol sulfonic acid, 4,4-dihydroxy diphenyl sulfone and an aldehyde.

18. A formulation according to claim 14, wherein said resin is a condensation product of sulfonated 3,3-dihydroxydiphenylsulfone and an aldehyde.

19. A formulation according to claim 15, wherein said weight average molecular weight is 100,000 to 500,000 and said number average molecular weight is 50,000 to 100,000.

20. A formulation according to claim 19, wherein said aqueous vehicle further contains a semi-soluble or insoluble ethylmethacrylate polymer.

21. A formulation according to claim 19, wherein said aqueous vehicle further contains an anionic or non-ionic fluorochemical.

20090959-031900

Handwritten signature/initials

22. A formulation according to claim 17, wherein said ethylmethacrylate polymer has a weight average molecular weight of 100,000 to 500,000; and a number average molecular weight of 25,000 to 100,000.

23. A formulation according to claim 15, additionally containing a bleached aldehyde condensate of a naphthalene sulfonic acid.

24. A method of imparting stain resistance to acid colorants, to a fibrous polyamide or wool substrate comprising:

contacting said fibrous polyamide substrate with a semi-bleached to bleached sulfonated aromatic condensation resin in an aqueous vehicle, said resin being selected from the group consisting of condensation products of:

- i) phenolsulfonic acid, dihydroxydiphenyl sulfone and an aldehyde;
- ii) sulfonated dihydroxydiphenylsulfone, dihydroxydiphenyl sulfone and an aldehyde;
- iii) sulfonated dihydroxy diphenyl sulfone and an aldehyde; and
- iv) mixtures of i), ii) and iii).

25. A method according to claim 20, wherein said substrate is a polyamide substrate and said aqueous vehicle further contains a semi-soluble methacrylic acid polymer having a weight average molecular weight of 100,000 to 500,000 and a number average molecular weight of 50,000 to 100,000.

1009999-031900

26. A method according to claim 25, wherein said vehicle further contains a semi-soluble or insoluble ethylmethacrylate polymer having a weight average molecular weight of 100,000 to 500,000 and a number average molecular weight of 25,000 to 100,000.

27. A method according to claim 26, wherein said vehicle further contains an anionic or non-ionic fluorochemical.

28. A method according to claim 24, wherein said resin is a condensation product of 4,4-dihydro diphenyl sulfone, sulfonated 4,4-dihydroxy diphenyl sulfone and an aldehyde.

29. A method according to claim 24, wherein said resin is a condensation product of phenol sulfonic acid, 4,4-dihydroxy diphenyl sulfone and an aldehyde.

30. A method according to claim 24, wherein said resin is a condensation product of sulfonated 4,4-dihydroxydiphenylsulfone and an aldehyde.

31. A method according to claim 24, wherein said substrate is a wool substrate.

2061ED 65666001

Adel
45